

**REMARKS**

Claims 2-10, 15-21, 25-27, 30-38, 71 and 72 are currently pending. Claims 2-10, 15-21, 25-27, 30-37, 71, and 72 stand rejected under 35 U.S.C. §103(a). Claims 5-10, 21, and 36 have been objected to and claims 2-4, 15-17, 19, 20, 34, 37, and 38 stand rejected under 35 U.S.C. § 112, second paragraph.

Claims 2-10, 15-17, 21, 34, and 36-38 have been amended and claims 19 and 20 have been cancelled without prejudice. Accordingly, after entry of the amendment, the pending claims are claims 2-10, 15-18, 21, 25-27, 30-38, 71 and 72. The Applicants respectfully traverse the grounds for rejection and requests withdrawal thereof.

**CLAIM OBJECTIONS**

Claims 5-10, 21, and 36 have been objected. Claims 5-10, 21, and 36 have been amended. Accordingly, the grounds for rejection are now believed to be moot. Withdrawal of the grounds for rejection is respectfully requested.

**SECTION 112, SECOND PARAGRAPH REJECTIONS**

Claims 2-4, 15-17, 19, 20, 34, 37, and 38 stand rejected under 35 U.S.C. § 112, second paragraph. Claims 19 and 20 have been cancelled without prejudice and claims 2-4, 15-17, 34, 37, and 38 have been amended. Accordingly, the grounds for rejection are now believed to be moot. Withdrawal of the grounds for rejection is respectfully requested.

SECTION 103(a) REJECTIONS

Claims 2-4, 15-19, 21, 25-27, 30-37, 71, and 72 stand rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent Number 7,403,821 to Haugland, et al. ("Haugland") in view of U.S. Patent Number 6,063,046 to Allum ("Allum") and claims 5-10 and 20 stand rejected under 35 U.S.C. 103(a) as unpatentable over Haugland and Allum, further in view of U.S. Patent Number 6,174,294 to Crabb, et al. The Applicants respectfully traverse the grounds for rejection for the following reasons.

Claims 2-4, 15-19, 21, 25-27, 30-37, 71, and 72

Claims 2-4, 15-19, 21, 25-27, 30-37, 71, and 72 stand rejected under Haugland and Allum. However, the Affidavit of Peter F. Meyer under 37 CFR § 1.131 is provided to demonstrate conception and reduction to practice in the instant application prior to the effective publication date of Haugland. Accordingly, withdrawal of the grounds for rejection is respectfully requested.

o 37 CFR § 1.131

Per 37 CFR § 1.131, an inventor may submit an oath or declaration "to establish invention of the subject matter of the rejected claim prior to the effective date of the reference [ ]." 37 CFR § 1.131(a). More specifically, a showing of facts shall "establish reduction to practice prior to the effective date of the reference, or conception of the invention prior to the effective date of the reference coupled with due diligence from prior to said date to a subsequent reduction to practice or to the

filing of the application." 37 CFR § 1.131(b). Accordingly, the elements necessary to establish invention of the subject matter of the rejected claim prior to the effective date of the reference are either:

(1) a reduction to practice prior to the effective date of the reference; and/or

(2a) conception of the invention prior to the effective date of the reference coupled with

(2b) due diligence from prior to said date to a subsequent reduction to practice or

(2c) due diligence from prior to said date to the filing of the application.

o A Reduction to Practice prior to the Effective Date of the Reference

The effective date of publication of Haugland is August 23, 2001.

An actual reduction to practice of a PC-based embodiment of the invention as claimed by the inventors occurred on March 24, 2000, which is "prior to the effective date of the reference." See, e.g., Affidavit, ¶ 4. Hence, invention of the subject matter of the rejected claim prior to the effective date of the reference is established pursuant to 37 CFR 1.131.

A wearable and portable, microprocessor-based embodiment of a Sensory Prosthetic for Improved Balance Control was conceived at least on or about May 11, 2000. See, e.g., Id., ¶ 5. Moreover, a constructive reduction to practice of a wearable and portable, microprocessor-based embodiment of the device occurred on or about February 15, 2001 when a provisional patent application was filed.

See, e.g., Id., ¶ 4. The date of the constructive reduction to practice precedes the effective date of the reference. Hence, conception of the subject matter of the rejected claim and constructive reduction to practice prior to the effective date of the reference is established pursuant to 37 CFR 1.131.

A wearable and portable, microprocessor-based embodiment of a Sensory Prosthetic for Improved Balance Control was conceived at least on or about May 11, 2000. See, e.g., Id., ¶ 5. Laboratory notebook pages prepared on or about July 2, 2000 document continued due diligence. See, e.g., Id., ¶ 11. A dissertation prospectus dated December 12, 2000 shows further continued due diligence and future work "to test hypotheses regarding the role of plantar cutaneous afferents in normal balance control". See, e.g., Id., ¶ 12. Laboratory notebook pages prepared on or about January 10, 2001 show continued due diligence. See, e.g., Id., ¶ 14. A progress report to the National Aeronautics and Space Administration ("NASA"), which was prepared on or about January 23, 2001, demonstrates continued due diligence and provides a schedule for future work. See, e.g., Id., ¶ 15.

A description for an internship project given to Mr. Eilert Klatte, who was offered a Visiting Research Assistant position at Boston University to develop the March 24, 2000 prototype "into a portable one suitable for use in field-testing", by Professor and co-inventor Lars Oddsson dated July 20, 2001 provides further due diligence. See, e.g., Id., ¶ 16 and 17. A summary of Mr. Klatte's cumulative design and testing work is provided in "Design of a Mobile Artificial Sensory System for Feet, Internship Project September 2001 - February 2002", which evidences continued due diligence. See, e.g., Id., ¶ 18.

Staff meeting notes of the Injury Analysis and Prevention Lab Staff designated IP43-IP48 corresponding, respectively, to monthly staff meetings of September 19, 2001, October 17, 2001, November 21, 2001, December 19, 2001, January 16, 2002, and February 20, 2002 continuous progress during the September 2001 through February 2002 timeframe. See, e.g., Id., ¶ 19. Programming code for the foot pressure device dated February 11, 2002 also provides evidence of continued due diligence. See, e.g., Id., ¶ 20.

In short, a May 11, 2000 date of conception and/or constructive reduction to practice of a microprocessor-based embodiment of the invention was coupled with due diligence beginning before the effective date of the Haugland reference to an actual reduction to practice or to filing of the instant application.

#### Claims 5-10 and 20

The Affidavit of Peter F. Meyer under 37 CFR § 1.131 is provided to demonstrate conception and reduction to practice in the instant application prior to the effective publication date of Haugland. Accordingly, withdrawal of the grounds for rejection is respectfully requested.

Here again, to summarize the affidavit, a March 24, 2000 actual reduction to practice of a PC-based embodiment of the invention as claimed preceded the publication date of the priority document relied on by Haugland, which is to say August 23, 2001. In addition to an actual reduction to practice, a constructive reduction to practice of the PC-based embodiment and of a microprocessor-based embodiment preceded the publication date of the priority document relied on by Haugland. Moreover, in

addition to an actual reduction to practice and a constructive reduction to practice of a PC-based embodiment of the device prior to the publication date of the Haugland priority document, due diligence was used to transform the May 11, 2000 constructive reduction to practice of the microprocessor-based embodiment of the invention as claimed.

In note form the Exhibits demonstrate:

Exhibit A -- March 24, 2000 conception and reduction to practice as claimed.

Exhibit B -- May 11, 2000 further conception as claimed.

Exhibit C -- February 2001 testing results of the system of March 24, 2000 as claimed.

Exhibit D -- October 23, 2000 disclosure as claimed submitted to inventors' employer, Boston University, Technical Transfer Officer.

Exhibits M,

N, O, P, Q -- July 20, 2001 thru February 20, 2002 diligence for a further reduction to practice.

The undersigned conducted a prior art search on February 28, 2002 and drafted the application with the priority date of the present application that was filed on April 12, 2002.

Thus the critical period for the priority date of the Haugland reference of August 23, 2001 until the present application's priority date of April 12, 2002 is covered with due diligence and by prior actual reduction to practice to provide a removal of Haugland which removes the Examiner's position.

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The Examiner is encouraged to telephone the undersigned attorney to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

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